

Center for Catalytic Science and Technology



CCST SEMINAR
APR 1 @ 10:00 AM in 366 CLB



MONICA ZANFIR
R&D Associate Director
Linde



KEY CATALYSTS IN BLUE H₂ PRODUCTION



Linde is a global leader in hydrogen production and distribution, delivering more than 1.3 billion cubic feet of hydrogen each day through an extensive network of over 1,000 km of pipelines, as well as through merchant liquid and packaged gas supplies. With substantial multi billion dollar investments in Blue H₂ production—leveraging autothermal steam reforming combined with advanced carbon capture and storage—Linde is actively shaping the transition toward a low carbon intensity energy landscape.

This seminar will provide an in depth overview of key unit operations central to Blue H₂ production,

with a particular focus on catalytic processes including steam reforming, pre reforming, autothermal reforming, and high & low temperature water gas shift. Participants will also gain insight into Linde's R&D capabilities and our ongoing efforts to maximize process efficiency, highlighting the essential role of industrial research in driving technological innovation and sustainable growth.

We invite you to join us for this informative session designed to deepen understanding of critical technologies and showcase how Linde continues to lead in clean energy solutions.

Dr. Zanfir has over 30 years of experience in conducting research in chemical engineering related areas. In her current position as an *R&D Associate Director* at Linde, she plays a key role in managing a robust R&D portfolio related to supply of industrial gases and their applications in various industries. She was involved in complex R&D projects conducting experimental, modeling and simulation work, related to hydrogen and syngas production, carbon capture, and waste to energy solutions. Previous joining *Linde (Praxair)* she was a researcher at University College London conducting cutting edge research in the area of micro-reactors and scale-up of pharmaceutical. She also was a process engineer and project manager at *Iprochim SA* Bucharest Romania, her native country, conducting engineering studies for mineral fertilizer complexes.

In the last 10 years, Monica has been actively engaged in Computing & Systems Technology Division (CAST) of AIChE acting as Area Chair for 10A *Systems and Process design* in 2015 and 2025. In 2024, she was part of the Foundation of Computer-Aided Process Design: FOCAPD2024 conference Organizing Committee. Monica has a PhD from University College London, UK, and MSc from UMIST, UK. She is a Chartered Engineer with Royal Academy of Engineering UK.